U.S. Fish and Wildlife Service - Midwest Region

Fisheries & Aquatic Resources Program

Fish Lines

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Fisheries & Aquatic Resources Program - Midwest Region

The Mission of the U.S. Fish & Wildlife Service: working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

The vision of the Service's Fisheries Program is working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support Federal mitigation programs for the benefit of the American public. Implementing this vision will help the Fisheries Program do more for aquatic resources and the people who value and depend on them through enhanced partnerships, scientific integrity, and a balanced approach to conservation.

Features

The freshwater drum serves as primary host for several mussel species of the Upper Midwest, but for some key projects at the Genoa National Fish Hatchery, they will be used as a host for the butterfly and pink heelsplitter.

To view other issues of "Fish Lines," visit our website at:
http://www.fws.gov/midwest/Fisheries/library/fishlines.htm

Fish Lines

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Dustin Hart of the La Crosse Fish Health Center conducts fish health sampling on Pendills Lake.

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Great Lakes Mass Marking Program Prepares Fleet for 2012 Season

BY KEVIN PANKOW, GREEN BAY FWCO

The Great Lakes Fish Tag and Recovery Laboratory, headquartered at the Green Bay Fish and Wildlife Conservation Office (FWCO), completed its annual winter maintenance of its AutoFish trailer fleet in preparation for the 2012 mass marking season. The program currently owns four AutoFish and one manual trailer manufactured by Northwest Marine Technology. The program's operational budget is currently funded by the Great Lakes Restoration Initiative (GLRI).

-USFWS/KevinPankow

Three AutoFish tagging and clipping trailers stationed at the Green Bay Fish and Wildlife Conservation Office underwent annual winter maintenance in preparation for the fish tagging season.

Biologists Jim Webster, Allen Lane, Elliot Hoffman and Kevin Pankow completed maintenance of the AutoFish trailers in early February. The fish sorter was configured from lake trout to salmon operation, and the AutoFish line components, fin clipping and tagging mechanisms were disassembled, cleaned and calibrated.

The AutoFish system is a self-contained mobile fish marking and tagging trailer that has the ability to apply coded-wire tags (CWT) and adipose fin clips to trout and salmon with minimal handling stress. Within each unit there is a sorter that measures and distributes each fish to one of six size-specific lines. Once in a line, the fish enters a chute that directs the fish towards devices that provide an adipose fin clip and a CWT into the nose of the fish. The fish is then released through quality control devices that test for the presence of a CWT with a metal detector and the quality of the fin clip using digital image processing. If a tag is detected and the fin clip deemed to be adequate, the fish is released to a raceway in the hatchery. If either the tag or the fin clip is missing, the fish is rejected and hand processed to correct the deficiency at the rear of the trailer. The unit is capable of tagging and clipping 6,000 or more fish per hour.

The Chinook salmon marking season is scheduled to begin in early March. Approximately 4.3 million Chinook salmon are scheduled to be marked at eight hatcheries in Illinois, Indiana, Michigan and Wisconsin. In 2011, the team marked and tagged approximately 4.6 million Chinook salmon and 5.3 million lake trout at state and federal hatcheries throughout the Great Lakes region.

-USFWS/AllenLane

Biologists Elliot Hoffman (front) and Kevin Pankow maintain and clean line components in the AutoFish trailer prior to the beginning of the 2012 fish tagging season.

For further info about the Green Bay FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf

Great Lakes Fish Tag and Recovery Lab Completes Tag Extraction for 2011

BY ELLIOT HOFFMAN, GREEN BAY FWCO

The Great Lakes Fish Tag and Recovery Lab, headquartered at the Green Bay Fish and Wildlife Conservation Office (FWCO), recently completed the annual extraction and reading of coded-wire tags (CWT) for the Great Lakes region. Federal, state and tribal fisheries programs send Chinook salmon and lake trout snouts to the Green Bay FWCO for CWT extraction. This year, the New York Department of Environmental Conservation, Indiana Department of Natural Resources (DNR), Michigan DNR, Wisconsin DNR, Illinois DNR, Ontario Department of Ministry, Little River Band of Ottawa Indians, Inter-tribal Fisheries and Assessment Program and Alpena FWCO sent in samples for processing.

-USFWS/AllenLane

Biologist Kevin Pankow of the Green Bay Fish and Wildlife Conservation Office extracts a coded-wire tag from the snout of a lake trout.

Biologists Allen Lane, Kevin Pankow, Jim Webster and Elliot Hoffman processed 3,217 Chinook salmon and lake trout snouts. The Green Bay FWCO has a wet lab and a dry lab equipped to batch-process fish snouts (CWTs are imbedded in the snouts), and read CWTs after extraction. In the near future, the Green Bay FWCO anticipates extracting and reading nearly 100,000 CWTs a year. Analyzing the patterns of CWT returns provides unique insights to biologists on levels of natural reproduction (all Chinook salmon and lake trout stocked into Lakes Michigan and Huron are now tagged and clipped), migration patterns, and survival of different strains, along with other important economic and biological aspects of the fishery.

This year marks the third season of operation for the Great Lakes Mass Marking program. In addition to the CWT extraction this winter, the team in 2011 tagged and marked nearly 4.7 million Chinook salmon at state hatcheries in Wisconsin, Illinois, Indiana and Michigan and 5.3 million lake trout at four National Fish Hatcheries in Wisconsin, Michigan and Vermont. Similar numbers of fish will be tagged in 2012.

For further info about the Green Bay FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf

A Sharing O' the Green

BY MARK STEINGRAEBER, LACROSSE FWCO

Partnerships are essential for effective fisheries conservation. Many agencies, organizations, and private individuals are involved in fisheries conservation and management, but no one can do it alone. Together, these stakeholders combine efforts and expertise to tackle challenges facing fisheries conservation. The success of these partnerships will depend on strong, two-way communications and accountability.

For a fourth consecutive year, the La Crosse Fish and Wildlife Conservation Office (FWCO) and the Genoa National Fish Hatchery (NFH) co-hosted an annual recognition dinner to publicly acknowledge many of their key volunteers, friends and local program partners.

-USFWS

Folks gather for the annual recognition dinner which publicly acknowledges key volunteers, friends and local program partners who work with La Crosse, Wisconsin, area Fisheries offices.

After a traditional Irish blessing and delicious meal, guests were encouraged to grab a cup of emerald hatchery "pondwater" (or other alternative beverage) and settle in to enjoy the evening's featured presentation, the documentary film "GreenFire: Aldo Leopold and the Land Ethic in the 21st Century".

This cinematic portrayal of Leopold's conservation ethos, and its human dimensions, conveyed an inspirational message that carried over to the recognition of our guests for their diverse contributions to benefit the conservation of aquatic resources in 2011.

Following an Irish toast, kudos was first given to partners from local rod and gun clubs who actively supported the FWCO-sponsored *2011 Youth Outdoor Fest* in La Crosse. Next on our "Thank You" list were members of the *Friends of the Upper Mississippi Fishery Services* who collectively support the La Crosse FWCO, Genoa NFH and La Crosse Fish Health Center with their time and talents.

Volunteers contributed 658 hours of service to the La Crosse FWCO and 1,058 hours to the Genoa NFH during the past year. Chief among these service-driven individuals for the La Crosse FWCO in 2011 were Don Schroeder (121 hours), Bill Thrune (113 hours), Nancy North (85 hours), and April Ammann (80 hours).

For the second consecutive year, Genoa NFH recognized Lloyd Lorenz as its "Volunteer of the Year". Meanwhile, Chuck Chihak received the prestigious "Conservation Steward" award.

The evening's final tribute went to Owen Johnson whose name was added to the La Crosse FWCO's "Volunteer Hall of Fame" plaque. An enthusiastic member of the La Crosse Area Camera Club, Owen has contributed nearly 300 hours of photographic services and hundreds more high quality images to document office activities during the past five years.

As partners, friends, volunteers and colleagues prepared to depart, all paused to reflect on the famous Irish blessing: "May the road rise to meet you, may the wind always be at your back, may the sun shine warm upon your face, the rains fall soft upon your fields and, until we meet again, may God hold you in the palm of His hand!" Hope to see you all again next year!

For further info about the La Crosse FWCO: http://www.fws.gov/midwest/lacrossefisheries/

Annual Brush Pile Drop at Crab Orchard Lake

BY JOSE RIVERA, CARTERVILLE FWCO

During February and March, staff from the Carterville Fish and Wildlife Conservation Office (FWCO) took part in the annual brush pile drop at Crab Orchard Lake. At 7,000 acres, Crab Orchard Lake is the largest of three reservoirs located within the Crab Orchard National Wildlife Refuge (NWR) in southern Illinois. The lake is popular with local anglers for its healthy populations of sport fish, with crappie most commonly targeted.

The benefit of dropping brush piles in Crab Orchard Lake is twofold. The brush piles provide needed fish cover. Without sufficient cover in a lake, it is difficult for game fish species to evade predation by larger predators. Also, fish can be difficult to locate

without brush piles (or fish structure) and would be widely distributed throughout the water body, leading to poor catch rates. The strategic placement of brush piles concentrate fish, making it easier for anglers to locate schools of fish.

Aside from providing fish cover, the annual brush pile drop also provides an outlet to recycle discarded Christmas trees. Each year, the Illinois Department of Natural Resources (DNR) accepts trees from the public to be used as fish habitat where needed, thereby keeping them out of area landfills.

Joined by local volunteers, the Carterville FWCO, Illinois DNR and Crab Orchard NWR teamed up to construct brush piles by attaching discarded trees to cinder blocks. The brush piles were then loaded onto boats and dropped at predetermined locations throughout the lake. The Illinois DNR maintains a map, which is updated annually and provided to the public free of charge, pinpointing locations of brush piles.

The annual brush pile drop at Crab Orchard Lake is an example of "outside the box" thinking, giving a second life to discarded trees as habitat enhancement and cover for fish. The annual event also highlights how federal and state resource agencies can join forces with the public to promote recreational enjoyment of our natural resources.

-USFWS/RobSimmonds

Carterville Fish and Wildlife Conservation Office staff drop brush piles for enhancement of fish habitat into Crab Orchard Lake, which is located on the Crab Orchard National Wildlife Refuge in Illinois.

For further info about the Carterville FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/carterville.pdf

Streams Campaign Getting Rolling in Illinois

BY ROB SIMMONDS, CARTERVILLE FWCO

Along with 49 other states, Illinois developed a State Wildlife Action Plan to improve management of "species in greatest need of conservation." In Illinois, that plan was divided into a variety of campaigns to help facilitate implementation. Illinois Department of Natural Resources (DNR) has been working diligently over the past several years to implement the plan as a whole, with some campaigns gaining steam more quickly than others.

In an effort to make major steps forward under the Streams Campaign, Illinois DNR convened a meeting of various state, federal and non-governmental organization partners to re-assess and improve upon the goals and actions under the Streams Campaign. The Fish and Wildlife Service was represented by both the Fisheries Program (Rob Simmonds) and Private Lands Program (Gwen Kolb). Good progress was made with new data becoming available soon from the Illinois Natural History Survey to help identify key species and areas where efforts will be focused. We look forward to continued collaboration so that together we can work as effectively as possible, to conserve aquatic species with greatest need.

For further info about the Carterville FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/carterville.pdf

Fifty-thousand Feet of Fish and Fun

BY COLBY WRASSE, COLUMBIA FWCO

The Fisheries Program maintains and implements a comprehensive set of tools and activities to conserve and manage self-sustaining populations of native fish and other aquatic resources. These tools and activities are linked to management and recovery plans that help achieve restoration and recovery goals, provide recreational benefits, and address Federal trust responsibilities. Sound science, effective partnerships, and careful planning and evaluation are integral to conservation and management efforts.

During February, Columbia Fish and Wildlife Conservation Office (FWCO) completed standard gillnetting for the 2012 field season of the Pallid Sturgeon Population Assessment Project on the Missouri River. Crews deployed 50,000 feet (9.5 miles) of gillnet from November through February. The results were both surprising and promising.

We collected 31 pallid sturgeon in gillnets this year, the highest yearly total ever for our office. In fact, this year's pallid sturgeon total was more than double the number we collected in any previous year with gill nets. Of special interest was the relatively high number of large pallid sturgeon (greater than 30 inches), and the high number of untagged, potentially wild (pending genetic results) pallid sturgeon. Most pallid sturgeon we collected appeared to be rather plump and in good condition. Three large pallid sturgeon were transported to the Neosho National Fish Hatchery as potential broodstock fish for the stocking program.

Shovelnose sturgeon continued to be the most common species in our gillnet samples. Large blue catfish were frequently caught, with some individuals surpassing 50-pounds. Blue sucker and sauger were also present in good numbers. Unfortunately, invasive Asian carp were commonly collected in gillnets in 2012. A few species rare to lower portions of the Missouri River were also caught; these included a rainbow trout, a northern pike, and a white perch.

The 2012 season represents the first gillnet dataset we have following the prolonged flooding of the Missouri River during 2001. It will be interesting to compare this year's data with previous years to see if we can detect any differences in relative abundance or condition of Missouri River fish.

For further info about the Columbia FWCO: http://www.fws.gov/midwest/columbiafisheries/

The Midwest Region Mussel Program Builds toward a Busy Spring

BY NATHAN ECKERT, GENOA NFH

February is generally a slow month for mussel propagation as most wild mussels are still cold and asleep. Even still, biologists at Genoa National Fish Hatchery (NFH) were making preparations for the coming production season.

Any fish that come to Genoa NFH for mussel propagation must pass a health inspection to assure that no pathogens are introduced to fish on station. During February, two sets of fish were tested as part of our plans for 2012.

Our ongoing project with the U.S. Geological Survey to evaluate the effectiveness of a compound that kills zebra mussels required us to propagate the black sandshell, a mussel that uses walleye as the primary host. Hopefully, the tests will show that the compound is safe for native animals and it can be approved for use.

Two new projects, both Natural Resource Damage Assessment (NRDA) projects (one in Iowa and the second in Ohio) have us bringing freshwater drum on-station. The freshwater drum serves as primary host for several mussel species of the Upper Midwest, but for these projects we are primarily concerned with the butterfly and pink heelsplitter.

A small sample of fish from each source was tested for parasites, viral and bacterial pathogens at the La Crosse Fish Health Center, and fortunately both sets of fish passed. The walleye are currently on-station waiting to provide their service for the mussel program. Normally we collect freshwater drum from another nearby National Fish Hatchery; however, it was affected by flood water this year causing us to look far and wide for an alternate source. We found one a little farther away, all the way down in Langston, Oklahoma (OK). Langston University is a small college a few miles northeast of Oklahoma City and they run a small hatchery as part of their agriculture extension unit. Thankfully, the folks at Langston have fish to spare. Now our plans for March include a road trip to transport fish back to Genoa NFH.

For further info about the Genoa NFH: http://www.fws.gov/midwest/genoa/

Huron-Erie Corridor: The Latest Hotspot for Sea Lampreys in the Great Lakes?

BY JASON KREBILL, LUDINGTON BIOLOGICAL STATION

Historically, the Lake Huron-Lake Erie Corridor (HEC), which consists of the St. Clair River, Lake St. Clair and the Detroit River, was believed to produce few sea lampreys that survived. The survivors would migrate to Lake Erie and parasitize host fishes. Sea lamprey larvae have been collected in the St. Clair River since the 1980's, but observations of parasitic sea lampreys on host fish in Lake St. Clair have been rare. In addition, lampricide control efforts in tributaries that drain into the central and eastern basin of Lake Erie, which were first initiated in 1986, resulted in immediate declines in sea lamprey abundance. This suggested that these tributaries were the primary source of sea lampreys in Lake Erie.

-DFO/K.Tallon

As part of a study to determine if the Huron-Erie Corridor is becoming a hotspot for invasive sea lampreys, a map was produced showing bottom classification types such as mud, silt, sand, weed, gravel and rock.

In recent years, despite increased lampricide control in known infested tributaries, the parasitic sea lamprey population estimate in Lake Erie has returned to near pre-control levels of abundance. However, despite increased assessment efforts, no streams were discovered with new populations of larval sea lampreys. Is it possible that the HEC is producing more sea lampreys or that they are surviving better due to improvements in water quality or habitat?

-USFWS/J.Krebill

Fish and Wildlife Service and Department of Fisheries and Oceans Canada (DFO) staff collaborated to initiate the collection of larval habitat data in the St. Clair and Detroit rivers, using the DFO vessel ROXANN.

To help answer this question, Fish and Wildlife Service and Fisheries and Oceans Canada staff collaborated to initiate the collection of larval habitat data in the St. Clair and Detroit rivers. Habitat areas were classified and estimated using the RoxAnnTM GD seabed classification system. Areas are selected for RoxAnnTM mapping based on the presence of a sea lamprey population that cannot be delineated or confined by other means. RoxannTM uses the raw

Aquatic Invasive Species

Aquatic invasive species are one of the most significant threats to fish and wildlife and their habitats. Local and regional economies are severely affected with control costs exceeding $123 billion annually. The Fisheries Program has focused its efforts on preventing introductions of new aquatic invasive species, detecting and monitoring new and established invasives, controlling established invasives, providing coordination and technical assistance to organizations that respond to invasive species problems, and developing comprehensive, integrated plans to fight aquatic invasive species.

information from the first and second echo on any generic Echo sounder to process roughness (E1) and hardness (E2) data. The E1 and E2 data are then interfaced with a RoxannTM compatible plotter and displayed based on the RoxannTM Bottom Classification Palette. The data can be displayed in 2D or 3D display modes, as roughness (E1) only, hardness (E2) only, or a combination of E1/E2, which results in bottom classification such as mud, silt, sand, weed, gravel and rock. Habitat classifications from the RoxAnnTM were then ground truthed and verified by taking habitat samples with a Ponar dredge.

Once complete, this information will be used to estimate the area of suitable larval habitat in the HEC. That data, along with measures of larval density, will be used to estimate larval abundance.

Is the HEC the next hot spot for sea lampreys in the Great Lakes? We still don't have the answer, but characterizing the available larval habitat is a great start in helping answer this question.

The Sea Lamprey Management Program continues to work closely with partners to control populations of sea lampreys in tributaries of the Great Lakes to protect the fishery and related economic activities in the basin (an estimated annual benefit of more than $7 billion/year to the region). The Fish and Wildlife Service delivers a program of integrated sea lamprey control in United States waters of the Great Lakes in partnership with the Great Lakes Fishery Commission.

-USFWS/J.Krebill

River bottom sustrate is sampled or "ground truthed" using a ponar dredge. The substrate sample information will be compared to the RoxAnnTM GD seabed classification system data results.

For further info about the Ludington Biological Station: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/ludington.pdf

River Offices Meet to Discuss Asian Carp Game Plan in 2012

BY SAM FINNEY, CARTERVILLE FWCO

Biologists from the three "River" offices of the Midwest Region fisheries program met on February 15th and 16th to discuss the upcoming strategies for sampling, managing, and controlling Asian carps in the upper Illinois River and the Chicago Area Waterways System. The La Crosse, Columbia and Carterville Fish and Wildlife Conservation Offices (FWCO) have been working collectively with our numerous external federal, state and private partners, to combat Asian carp for quite a few years now.

Discussions at this year's meeting were fairly straightforward compared to previous years as roles and tasks for managing Asian carp have become refined. Projects that offices will lead this year include examining fish behavior at the electric barrier, studying the abundance location and movements of small Asian carp, testing novel new methods and gears for capturing Asian carp, and surveying for Asian carp in the Des Plaines River. Additionally, Fish and Wildlife Service fisheries personnel will lend a helping hand on other projects prescribed by the 2012 "Monitoring and Rapid Response Plan for the Upper Illinois River and the Chicago Area Waterways System". These projects are numerous and varied but fall under the categories of barrier effectiveness, monitoring, removal, gear effectiveness and alternative pathways. Everyone is looking forward to another successful year of keeping Asian carp out of the Great Lakes!

For further info about the Carterville FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/carterville.pdf

Star Trekking

BY CAREY EDWARDS, IRON RIVER NFH

The Iron River National Fish Hatchery (NFH) held its second annual candlelight trek on February 25th from 7 p.m. to 9 p.m. Guests could walk, ski or snowshoe the nearly mile long trail by the light of luminaries. Supporting the hatchery with this venture was the *Friends of the Iron River National Fish Hatchery*. The group purchased hot chocolate, hot cider and s'more fixings for event goers to enjoy.

-USFWS

Conditions were perfect for snowshoeing at the second annual candlelight trek at the Iron River National Fish Hatchery.

Despite the lack of snow, the trail was still in great shape for walking and snowshoeing. Tea lights set in one gallon plastic buckets served as luminaries and wrapped the trail in a warm glow. The weather was perfect for an evening stroll, and with the clear skies, trekkers were star gazing and counting shooting stars. Over 65 event goers gathered around the fire to roast marshmallows, drink cocoa and chat about the pleasant evening. Hatchery staff and Friends members were able to show off the new warming shack that was built in late fall. After this successful occasion, stay tuned for more information to come on future evening events at the Iron River NFH.

As the population in the United States continues to grow, the potential for adverse impacts on aquatic resources, including habitat will increase. At the same time, demands for responsible, quality recreational fishing experiences will also increase. The Service has a long tradition of providing opportunities for public enjoyment of aquatic resources through recreational fishing, habitat restoration, and education programs and through mitigating impacts of Federal water projects. The Service also recognizes that some aquatic habitats have been irreversibly altered by human activity (i.e. - dam building). To compensate for these significant changes in habitat and lost fishing opportunities, managers often introduce non-native species when native species can no longer survive in the altered habitat.

For further info about the Iron River NFH: http://www.fws.gov/midwest/ironriver/

Winter in the Wetland

BY JENNIFER BAILEY, GENOA NFH

Over 100 students experienced learning in the out-of-doors this winter in Genoa National Fish Hatchery's (NFH) Outdoor Classroom. Fifth grade students learned about wetland mammal habitats and tracks by exploring muskrat territory, and by building their own animal shelters during free exploration time. Free time for exploring the wetland is important for developing leadership skills, building confidence, making friends and working with others, as well as providing healthy physical activity necessary for concentration and learning. Trapper Dan Kumlin presented furs, trapping, and a lesson on preparing a muskrat fur, as well as ice safety and ice fishing know-how. Seventh graders learned how to clean a fish, cook outdoors, and "Leave No Trace" practices. Thanks to all staff, teachers and volunteers who make learning in the outdoors a recurring success at the Genoa NFH.

-USFWS

Students explore a muskrat house at Genoa National Fish Hatchery's Outdoor Classroom.

For further info about the Genoa NFH: http://www.fws.gov/midwest/genoa/

Streamside Rearing Trailer Construction Marches On

BY DOUG ALOISI, GENOA NFH

Science and technology form the foundation of successful fish and aquatic resource conservation and are used to structure and implement monitoring and evaluation programs that are critical to determine the success of management actions. The Service is committed to following established principles of sound science.

Genoa National Fish Hatchery (NFH) maintenance staff has been moving at near light speed scrambling to put together another streamside rearing trailer this winter at the request of the Ashland Fish and Wildlife Conservation Office (FWCO).

-USFWS

Displayed is the interior of a newly constructed streamside rearing unit which will be used to rear lake sturgeon this summer on the Ontonagon River of the Upper Peninsula of Michigan, which flows into Lake Superior.

After completion of the initial trailer and first year of streamside rearing operations on the Kalamazoo River, Michigan, last year, many people interested in sturgeon restoration were watching closely to see positive results. Streamside rearing takes the already challenging task of rearing larval lake sturgeon to the next level, adding in varying water temperatures and poor water quality during rainfall events to the myriad of other factors that can negatively affect larval survival. Other challenges also include unreliable or interrupted power supplies, and remote locations for the trailer sites.

Even with all of these challenges, the Kalamazoo River trailer released 106 juvenile sturgeon into the river last year, quite possibly the only successful juvenile production that the river saw last year due to extreme flooding events.

Even greater success is hoped for on the Ontonagon River of the Upper Peninsula of Michigan, which flows into Lake Superior. The Ontonagon River historically supported lake sturgeon, and has been targeted as a high priority river for lake sturgeon conservation and rehabilitation by many state, federal and Canadian biologists. Plans call for using lake sturgeon eggs collected from the Sturgeon River, Michigan, one of the closest lake sturgeon rivers that has an active and stable population. These eggs will be brought back to the trailer and hopefully hatched and grown out to a size of 6 to 8 inches long and released in the fall. During this time, it is hoped that the young lake sturgeon imprint on the river waters and recognize it as "home base". Then as the fish migrate out into Lake Superior to finish growing and maturing, they will remember their natal or "birth stream" and return to it one day perhaps over 20 years later to spawn.

The short winter and early warm up has also cut down on our delivery date even to the northern reaches of the Upper Peninsula. We have targeted the new trailer to come off the Genoa NFH assembly line in late April for deployment before the returning adults in the Sturgeon River heed the "call of the wild" and begin delivering their eggs and milt for spring "deployment" as well.

Funding for both streamside rearing units was provided through the Great Lakes Restoration Initiative - federal funds supporting a wide variety of habitat and fish and wildlife resource conservation efforts across the entire Great Lakes.

For further info about the Genoa NFH: http://www.fws.gov/midwest/genoa/

Thompson Creek Tributary Fish Passage Restoration

BY TED KOEHLER, ASHLAND FWCO

Loss and alteration of aquatic habitats are principal factors in the decline of native fish and other aquatic resources and the loss of biodiversity. Seventy percent of the Nation's rivers have altered flows, and 50 percent of waterways fail to meet minimum biological criteria.

Through the Partners for Fish and Wildlife Program, the Ashland Fish and Wildlife Conservation Office (FWCO) partnered with the Town of Washburn and the Bayfield County Land and Water Conservation Department to restore fish passage at a road crossing on a tributary to Thompson Creek in northern Wisconsin. The site is located on a township road and was a fish passage barrier to brook trout and other aquatic life. The existing structure was replaced with a new properly sized culvert which was installed to allow uninhibited passage of fish. This action resulted in the enhancement of the Thompson Creek watershed fishery by restoring connectivity to one and a half miles of habitat above the former barrier.

Thompson Creek is a tributary to Lake Superior. The Great Lakes Fishery Commission's Brook "Trout Rehabilitation Plan for Lake Superior" lists Thompson Creek as one of 15 streams along the Wisconsin Lake Superior shoreline which are important to brook trout rehabilitation. The goal for brook trout rehabilitation in Lake Superior is to maintain widely distributed, self-sustaining populations throughout their original habitat. Reaching this goal requires actions to restore habitat, regulate harvest and introduction of genetically appropriate strains of fish through stocking. The recent work on Thompson Creek is one more step in reaching the goal for brook trout, and in turn benefits a wide range of other aquatic species.

-USFWS/TedKoehler

Heavy equipment is used to install a new properly sized culvert on Thompson Creek, to allow uninhibited fish passage at this Bayfield County, Wisconsin site.

For further info about the Ashland FWCO: http://www.fws.gov/midwest/ashland/

Learning the Ways

BY JORGE BUENING, GENOA NFH

The Fisheries Program relies on a broad range of professionals to accomplish its mission: biologists, managers, administrators, clerks, animal caretakers, and maintenance workers. Without their skills and dedication, the Fisheries Program cannot succeed. Employees must be trained, equipped and supported in order to perform their jobs safely, often under demanding environmental conditions, and to keep current with the constantly expanding science of fish and aquatic resource management and conservation.

During the month of February, Jorge Buening and Nathan Eckert attended the La Crosse Fish Health Center's (FHC) short course, "Introduction to Fish Health". This was a week long course that explored a variety of fish health issues that can occur at a hatchery. A large portion of time was spent learning about parasitology, including a lab where wild fish were examined. In these fish, a variety of parasites were found ranging from the microscopic *Trichodina* to the more well-known tape worms.

The class also covered fungal and bacterial infections that can affect fish. We then ventured into antibiotic and chemical treatments for those infections. Even fish viruses were a topic of discussion. Viruses can be generalists such as viral hemorrhagic septicemia (VHS) where a variety of fish can be affected. They can also be species specific such as largemouth bass virus where only one species is affected, while other species can be carriers. We then looked at how the La Crosse FHC analyzes our fish and the tests needed in order to certify them as disease free. This included Polymerase Chain Reactions (PCR), bacterial tests and cell tissue cultures, where actual living cells are used to test for the presence of viruses. There was also time to tour the U.S. Geological Survey (USGS) Office on La Crosse, Wisconsin's French Island. While at USGS, we learned about the steps needed in order to have new drugs and treatments approved for use in aquaculture and toured the facility.

Overall, it was a very informative course that allowed us to expand our knowledge about fish diseases. We would like to thank the La Crosse FHC for putting the time and energy into providing the course, and we are better biologists for taking it.

-USFWS

2012 "Introduction to Fish Health" class participants.

For further info about the Genoa NFH: http://www.fws.gov/midwest/genoa/

Divers Make a Splash

BY SCOTT YESS, LACROSSE FWCO

The Fish and Wildlife Service's Midwest Regional Dive Team held its annual skills and swim training on February 22nd in La Crosse, Wisconsin.

Nine of the ten team members attended to work on: under water equipment removal; limited visibility maneuvers; buddy breath-in; rescue tow; and diver recovery. In addition to these skills, each diver had to swim 400 yards, snorkel swim 800 yards, and tread water for 15 minutes. Everyone completed each skill/test and is now ready for the field season.

The remainder of the day was spent reviewing safety requirements and last year's projects. Although the majority of their work is related to freshwater mussel recovery, the team also works on habitat mapping, invasive plant removal, filming fish behavior, and thermograph retrieval.

-USFWS

A member of the Midwest Regional Dive Team participates in a training exercise that gives a diver confidence to deal with stressful situations.

-USFWS

Members of the Midwest Regional Dive Team include: (front row, left to right) Tamara Smith, Jim Boase, Ann Runstrom, and Jeff Finley ; (back row, left to right) Nick Rowse, Bryan Simmons, Jorge Buening, Nathan Eckert, and Scott Yess .

For further info about the La Crosse FWCO: http://www.fws.gov/midwest/lacrossefisheries/

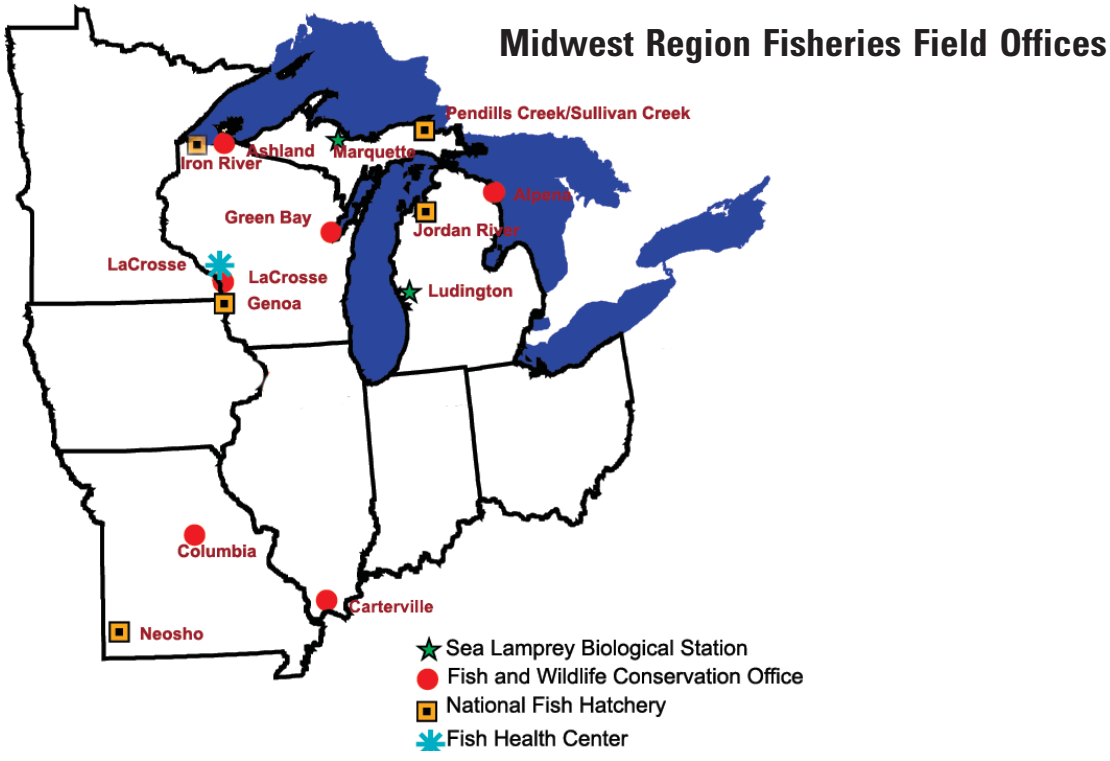
Midwest Region Fisheries Divisions

National Fish Hatcheries
The Region's National Fish Hatcheries primarily focus on native fish restoration/rehabilitation by stocking fish and eggs, such as pallid and lake sturgeon and by developing and maintaining brood stocks of selected fish strains, such as lake trout and brook trout. Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, stock rainbow trout in fulfillment of federal mitigation obligations and assist with recovery of native mussels and other native aquatic species.

Fish and Wildlife Conservation Offices
Fish and Wildlife Conservation Offices conduct assessments of fish populations to guide management decisions, perform key monitoring and control activities related to invasive, aquatic species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisheries databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and relicensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

Sea Lamprey Biological Stations
The Fish and Wildlife Service is the United States Agent for sea lamprey control, with two Biological Stations assessing and managing sea lamprey populations throughout the Great Lakes. The Great Lakes Fishery Commission administers the Sea Lamprey Management Program, with funding provided through the U.S. Department of State, U.S. Department of the Interior, and Fisheries and Oceans Canada.

Fish Health Center
The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state and tribal hatcheries in the region; conducts extensive monitoring and evaluation of wild fish health; examines and certifies the health of captive hatchery stocks; and, performs a wide range of special services helping to coordinate fishery program offices and partner organizations.



Midwest Region Fisheries Contacts

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Michigan

Alpena Fish and Wildlife Conservation Office
480 West Fletcher St.
Alpena, MI 49707
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989/356-3052
Area of Responsibility (Michigan, Ohio)

Jordan River National Fish Hatchery
6623 Turner Road
Elmira, MI 49730
Roger Gordon (*roger_gordon@fws.gov*)
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Ludington Biological Station
229 South Jebavy Drive
Ludington, MI 49431
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Marquette Biological Station
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Pendills Creek/Sullivan Creek National Fish Hatchery
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Neosho National Fish Hatchery
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Illinois

Carterville Fish and Wildlife Conservation Office
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Marion, Illinois 62959
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Area of Responsibility (Illinois, Indiana, Ohio)

Wisconsin

Ashland Fish and Wildlife Conservation Office
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Ashland, WI 54806
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Area of Responsibility (Michigan, Minnesota, Wisconsin)

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Green Bay Fish and Wildlife Conservation Office
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Area of Responsibility (Michigan, Wisconsin)

Iron River National Fish Hatchery
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LaCrosse Fish Health Center
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Area of Responsibility (Illinois, Iowa, Minnesota, Wisconsin)

Fish Tails

"Fish Tails" includes articles that are included in field station reports that are not published in the "Conservation Briefs." These articles are categorized by focus area and includes the article title, author and field station. The website link, where the full article can be viewed, is highlighted in blue type.

Partnerships and Accountability

Aquatic Species Conservation and Management

Aquatic Invasive Species

Public Use

Cooperation with Native Americans

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

Workforce Management

U.S. Fish & Wildlife Service
Volunteers & FUMFS

Let's Make Waves!

2012 Service Opportunities

What	Where	Who	When
Pike & Walleye Spawning	Genoa NFH	Genoa NFH	March - May
Fish Health Assessments	Genoa NFH	LaX FHC	April - May
Higgins Eye Propogation	Genoa NFH	Genoa NFH	April
Friends Youth Fishing Day	Genoa NFH	Genoa NFH	May 12
River Education Days	Trempealeau NWR	LaX FWCO	May 15-16
Veterans Fishing Day	Tomah VA Hospital	LaX FWCO	May 16
River Clean-Up Day	Miss. River-Pool 8	LaX FWCO	May 19
Youth Fishing Day	Necedah NWR	LaX FWCO	June 2
Trout Fest	Coon Valley	LaX FWCO	June 16
Youth Outdoor Fest	Pettibone Park	LaX FWCO	July 14
River Adventure Day	Miss. River-Pool 9	Genoa NFH	July 16
Sturgeon Tagging	Genoa NFH	LaX FWCO	August
Mussel Surveys	Central IA Rivers	LaX FWCO	August
Winged Mapleleaf Survey	St Croix River (MN/WI)	LaX FHC	September
Goby Round-Up	Illinois River	LaX FWCO	September
Wild Fish Health Surveys	Mississippi River	LaX FWCO	July - August
Electrofishing Surveys	Mississippi River	LaX FWCO	April - November
Data Entry	Onalaska	LaX FWCO	Year Round

U.S. Fish and Wildlife Service Fishery Program Offices

Genoa National Fish Hatchery
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Genoa, WI 54632
(608) 689-2605

La Crosse Fish Health Ctr
555 Lester Avenue
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La Crosse Fish & Wild. Cons. Office
555 Lester Avenue
Onalaska, WI 54650
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Friends of the Upper Mississippi Fishery Services
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Onalaska, WI 54650
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